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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,437	12/31/2001	Lawrence A. Booth JR.	5038-140	4825

32231 7590 09/05/2007
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EXAMINER	
KUMAR, SRILAKSHMI K	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
09/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

pm

Office Action Summary	Application No.	Applicant(s)
	10/037,437	BOOTH ET AL.
	Examiner	Art Unit
	Srilakshmi K. Kumar	2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 19 June 2007.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22,28-34 and 36-57 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-6,9,10,12-22,28-34 and 36-57 is/are rejected.

7)☐ Claim(s) 7,8 and 11 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

The following office action is in response to the Amendment filed June 21, 2007. Claims **1-22, 28-34, 36-57** are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. ***Claims 1-6, 9, 10, 12-14 and 40-49*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. (U.S. Patent Application Publication 2002/0047624) in view of Cok et al. (U.S. Patent no. 6,320,325).

With reference to **claims 1 and 48**, Stam et al. teaches a system (100) for use in a display comprising a plurality of LEDs forming a display panel, at least some of the LEDs (110) of the display panel operable in an emit mode and at least some of the LEDs (106) operable in a sense

mode. A driving circuit (processor, 401) to drive at least some of the LEDS (110) (see page 2, paragraph 25); a sensing circuit (see Figure 4, circuitry including 106, R7, Cl) to sense light received at some of the LEDS (see page 4, paragraph 41). Stam et al, teaches that the driving circuit (401) is adapted to be coupled to a row of LEDS (110) operable in the emit mode (see page 4, paragraph 39) while the sensing circuit is adapted to be coupled to a row of LEDS operable in the sense mode (see page 4, paragraph 41), the row of LEDs operable in the emit mode is adjacent to the row of LEDs operable in the sense mode (see page 4, paragraph 39).

While teaching that one of the emitting LEDs (101-103) may be used as a detector (106) (see page 3, paragraph 36), there fails to be any specific disclosure of using a switch coupled with the driving circuit, sensing circuit, and some of the LEDs to switch some of the LEDs from a sense mode to an emit mode. However, the examiner takes Official Notice that a switch coupled to the driving circuit, sensing circuit and some of the LEDs to switch from a sense mode to an emit mode is well known in the art as evidenced by Dunne (US 5,889,583) in the abstract where a pre-biasing circuit provides a reverse bias signal to the LED. Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to include the switch to prevent unnecessary switching from sense and emit modes.

Stam et al do not disclose a digital image display system.

Cok et at. teaches a digital image display composed of an array (10) of light-emitting pixels with driver circuitry (12) and control circuitry (14). A representative pixel (20) and a photosensor (21) coupled to the representative pixel. The photosensor (21) is responsive to the light output by the representative pixel (20) or ambient light (see column 4, lines 8-10), wherein the signal from the photosensor is connected to a feedback controller (22) coupled with the sensing (21) and

driving circuits (12), the feedback controller adjust the brightness of an LED in response to the amount of light sensed by that LED (see column 2, line 61-column 3, lines 10).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of a feedback circuit similar to that which is taught by Cok et al. in a device similar to that which is taught by Stam et. in order to provide a device allowing light detection capabilities together with feedback logic to control the operational characteristics of the display device, improved lifetime, better brightness, uniformity, and power consumption can be achieved (see Cok et al, column 2, lines 28-39).

With reference to **claim 2,** Stam et al. teaches that at least some of the plurality of LEDS of the display are operable in the emit mode and in the sense mode (see page 3, paragraph 36).

With reference to **claim 3,** Stam et al. teaches that one or more of the plurality of LEDs comprises an organic material (see page 3, paragraph 30).

With reference to **claim 4,** Stam et al. teaches that the sensing circuit comprises a reverse bias circuit coupled to the one of the plurality of LEDS operable in the sense mode (see page 3, paragraph 36).

With reference to **claims 5 and 6,** Stam et al. teaches that the sensing circuit is structured to sense an amount of light energy received by the one of the plurality of LEDS operable in sense mode and to sense an amount of light energy generated from outside the display panel (see page 3, paragraph 31).

With reference to **claim 9,** Stam et al. teaches wherein the LEDs are grouped into a plurality of groups; for each group of LEDs, the driving circuit is configured to drive the LEDs of the group when the group is in the emit mode (see page 2, paragraph 25); for each

group of LEDs, the sensing circuit is configured to sense an amount of light sensed by at least one of the LEDs of the group when the group is in the sense mode (see page 2, paragraph 25), and for each group of LEDs, the feedback controller is configured to adjust a drive level for each LED of the group in response to the amount of light sensed by the at least one of the LEDs of the group (see page 2, paragraph 25).

With reference to **claim 10**, Stam et al. teaches wherein the LEDs are arranged in rows in the display panel; and each row of LEDs of the display pane is one of the groups of LEDs (see page 4, paragraph 39)..

With reference to **claim 12**, Stam et al. teaches adjusting the brightness of the LEDs (110) with respect to the reading from the detector (106) by modulation of the pulse widths (see page 4, paragraph 43), which would thereby be inherent for the device to contain circuitry for adjusting the brightness as explained.

With reference to **claims 13 and 14**, Stam et al. teaches that the first LED of the display panel operable in the sense mode is configured to sense light from a source external to the display panel or from the second LED in the display panel operable in the emit mode (see page 3, paragraph 31).

With reference to **claims 40-44**, Stam et al. teaches that initial measurements of the intensity and optionally peak wavelength of the LEDs are made during manufacture and are stored in the memory, however fails to teach the usage of a comparator.

Cok et al. teaches that the signal detected by the photosensor is used to provide feedback from the light detected, wherein the signal generated is compared to a prior knowledge of the signal generated at the desired luminance (see column 3, lines 56-59).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of a feedback circuit similar to that which is taught by Cok et al. in a device similar to that which is taught by Stam et. in order to provide a device allowing light detection capabilities together with feedback logic to control the operational characteristics of the display device, improved lifetime, better brightness, uniformity, and power consumption can be achieved (see Cok et al, column 2, lines 28-39).

With reference to **claim 45,** the combination of Stam et al. and Cok et al. fails to teach the usage of a multiplexer as a splitter.

However the examiner takes Official Notice in that the usage of a multiplexer as a splitter of a signal is well known in the art as evidenced by Ohtsuki (US 6,901,090) in col. 10, lines 53-54.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention for, and the usage in the system similar to that which is taught by Stam and Cok in order to allow further separation of the signals applied to the LEDs to provide for independent driving of the LEDs.

With reference to **claims 46 and 47**, Stam et al. teaches a display system (100) comprising a plurality of OLEDs forming a display panel, which are known to be formed in column and rows, at least some of the LEDs (110) of the display panel operable in an emit mode and at least some of the LEDs (106) operable in a sense mode. A driving circuit (processor, 401) adapted to couple to one of the plurality of LEDS (110) operable in the emit mode and structured to cause the one of the plurality of LEDS operable in the emit mode to emit light (page 2, paragraph 25). A sensing circuit (see Figure 4, circuitry including 106, R7, Cl) adapted to couple to one of the plurality of LEDs operable in the sense mode and structured to cause the one of the plurality of LEDs operable in the

sense mode to sense light energy (see page 4, paragraph 41). It is also taught a storage circuit (402) structured to store data related to energy received by the sensing circuit (106) (see page 5, paragraph 52), as well as initial data signals (see page 6, paragraph 53, 55). While teaching a processor (401) coupled to the storage circuit and structured to control the driving circuit based on information stored in the storage circuit (see abstract), there is no specific disclosure that the processor is considered as a position locator including a comparator structured to compare data sensed by the diodes in the sensing mode.

Cok et al. teaches a display composed of an array (10) of light emitting pixels with driver circuitry (12) and control circuitry (14). A representative pixel (20) and a photosensor (21) coupled to the representative pixel. The photosensor (21) is responsive to the light output by the representative pixel (20) or ambient light (see column 4, lines 8-10), wherein the signal from the photosensor is connected to a feedback circuit (22) which processes the signal and modifies the control signals provided to driver circuitry (12) (see column 2, line 61-column 3, lines 10). Wherein the signal generated by the photosensor is compared to a prior knowledge of the signal generated at the desired luminance (see column 3, lines 56-60).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of a comparator similar to that which is taught by Cok et al. in a device similar to that which is taught by Stam et al. which suggest that the processor carries out the function of the comparator. A device allowing light detection capabilities together with feedback logic to control the operational characteristics of the display device, improved lifetime, better brightness, uniformity, and power consumption can be achieved (see Cok et al, column 2, lines 28-39).

With reference to **claim 49**, Stam teaches that the device further comprises a gamma uniformity calibration circuit to adjust the output of the LED over a range of output intensities (see paragraph 52-54).

With reference to claims 52-54, see rejections of claims 1, 11 and 48, above.

3. ***Claims 15-16*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. in view of Cok et al. as applied to claim 1 above, and further in view of Ikeda et al (U.S. Patent No. 5,566,372).

With reference to claim 15 and 16, Stam et al. teaches all that is required as explained above, including teaching that it is possible to use multiple detectors to sense output from different LEDs (see page 3, paragraph 35), as well as adjusting the brightness of the emitting LEDs based on reading from the detecting LEDs by adjusting the width of the pulses (see page 4, paragraph 43). It is also taught calibration by varying a discrete component, which thus varies the intensity of one or more colors of the LEDs (see page 6, paragraph 56). Cok et al. also teaches the usage of calibration (see column 4, lines 30-62), however there is no disclosure concerning a uniformity calibration circuit or a gamma uniformity calibration circuit operable to adjust the output of the LED in the display panel.

Ikeda teaches a gamma correction circuit in Fig. 2B, item 209 which is configured to adjust the output of the LED.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for calibration for the gamma correction, as taught by Ikeda, in a device similar to that which is taught by Stam et al. and Cok et at in order to thereby provide an OLED display device wherein the resultant display intensity is more desirable to the user.

3. **Claims 17-19 and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. in view of Cok et al. as applied to claim 1 above, and further in view of Ogawa (U.S. Patent No. 5,572,251).

With reference to **claims 17-19 and 41** Stam et al. and Cok et al. teach all that is required as explained above however fails to teach a position circuit coupled to the sensing circuit structured to determine a position on the display panel at which an external light source is pointing.

With reference to **claims 17-19 and 41,** Ogawa teaches an input system for a computer including an optical position detecting unit (12) and a laser pointer (15) for generating a light point (14) on the screen (11). Alight take-in portion (12a) of the optical position detecting unit (12) receives light from the light point (14) on the screen (11) and the optical position detecting unit (12) detects the position of the light point (14) (see column 3, lines 9-26). With further reference to claim 18, it is taught that it is possible for the device to detect two or more light points (see column 9, lines 9-13). Further with reference to claim 19, there is taught an image input section (29) receives signals from CCD image sensor (27) regarding positional information, which is then processed and passed to the computer unit (17) (see column 4, lines 20-35), which performs necessary data processing by using the position data that has been supplied (see column 3, lines 32-34). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the positional detection of an external light source being pointed at the display, as taught by Ogawa, in a device similar to that which is taught by Stam et al. and Cok et al., in order to thereby provide a system in which position detecting resolution with respect to the number of pixels in the image pickup device can be heightened so that an economical and high accurate optical position detecting unit can be provided.

4. **Claims 20-22 and 50-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stain et al. in view of Cok et al. as applied to **claims 1 and 48** above, and further in view of Forrest et at. (U.S. Patent Application Publication No. 2003/0213967).

With reference to the claims 20-22, 50-51, Stam et al. and Cok et al. teach all that is required as explained above, including sensing circuits for the OLED layer (see page 4, paragraph 41), however fails to teach that the OLED is a stacked OLED (SOLED).

Forrest et at teaches a multicolor organic light emitting device employing vertically stacked layers (see abstract) comprising a stack of LED (20-22) (see paragraph 38)

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the usage of a SOLED as taught by Forrest et al. in a device similar that which allows for a sensor in the LED layer is taught by Stam et al. and Cok et al. in order to provide a multicolor organic light emitting device employing several types of organic electroluminescent media which performs with more desirable intensity levels.

5. ***Claims 28, 29, and 32-35 and 55-57*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. in view of Mueller et al. (U.S. Patent No. 6,016,038).

With reference to **claim 28,** Stam et al. teaches a method for operating a display system that includes a display device (100) having one or more diodes (110) structured to generate light (see page 2, paragraph 25), and having one or more diodes (106) structured to sense light energy shining on them (see page 3, paragraph 31) comprising; a forward driving circuit (processor, 401) driving the diodes structured to generate light to cause an image to be shown on the display device; and reverse-biased circuit (see page 3, paragraph 36) measuring an amount of light energy shining on the diodes structured to sense light energy (see Figure 4, circuitry including 106, R7, Cl).

Even though Stam et al. teaches the driving circuitry, reverse-biased circuitry, and sensing circuitry there is no disclosure wherein the emit mode and the sense mode for the diode are mutually exclusive.

Mueller et al. teaches a LED system for generating light for display purposes (see abstract) wherein it is disclosed that the system is capable of operating each of the LEDs independently from one another in (see column 6, lines 23-63).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the display device to generate electroluminescent light, as taught by Mueller et al. to a device similar to that which is taught by Stam et al. in order to provide a organic electroluminescent light emitting display device wherein a pulse width modulated current control for the LED lighting assembly where each current controlled unit is uniquely addressable. This thereby provides a display module achieving maximum light intensity ratings (see Mueller et al., column 2, lines 21-35).

With reference to **claims 29**, Stam et al. teaches wherein sensing the light energy incident on a first diode and driving a second diode occurs substantially simultaneously (see page 2, paragraph 25).

With reference to **claim 32**, Stam et al. teaches that some of the light emitted from LEDs (110) is scattered from the diffuser (105) back towards detector (106) and thus allowing the detector (106) to sense the relative output of the LEDs (110). Additionally, the detector (106) can optionally measure the ambient light through the diffuse (105) (see page 3, paragraph 31).

With reference to **claims 33 and 35**, Stam et al. teaches that the overall brightness of the display device is adjusted based on the amount of light detected by the sensing diode in the sense mode (see page 2, paragraph 24).

With reference to **claim 34**, Stam et al. teaches adjusting the brightness of the emitting LEDs based on reading from the detecting LEDs by adjusting the width of the pulses (see page 4, paragraph 43).

With reference to claims 55-57, see rejections of claim 28, above.

5. ***Claims 30 and 31*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et at in view of Mueller et al. as applied to claim 28 above, further in view of Scozzafava et al. (U.S. Patent No. 5,073,446).

Even though Slam et al. teaches that it is possible for one of LEDs (110) to be used as a detector (106), and Mueller et al. teaches independently driving of the diodes, the disclosures fail to specifically teach the display cycle of the driving diodes and the measuring diodes.

Scozzafava et al. teaches that the organic EL devices are forward biased during a portion of each period and reverse biased during the remaining portion of the period (see column 4, lines 1-8).

Therefore it would have been obvious to one having ordinary skill in the art to allow for a display cycle of driving and sensing, as taught by Scozzafava et al, in a device similar to that which is taught by Stam et al. and Mueller et al. which allows for one LED to be driven to emit light and to detect emitted light in order to achieve a desired resultant intensity on the display device.

6. ***Claim* 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. in view of Mueller et al. as applied to claim 28 above, and further in view of Ikeda (U.S. Patent Publication No. 2003/0052904).

With reference to the claim Stam et al. teaches all that is required as explained above, including teaching that it is possible to use multiple detectors to sense output from different LEDs (see page 3, paragraph 35), as well as adjusting the brightness of the emitting LEDs based on reading from the detecting LEDs by adjusting the width of the pulses (see page 4, paragraph 43). It is also taught calibration by varying a discrete component, which thus varies the intensity of one or more colors of the LEDs (see page 6, paragraph 56), however there is no disclosure concerning a uniformity calibration circuit or a gamma uniformity calibration circuit operable to adjust the output of the LED in the display panel.

Ikeda teaches a pulse width modulation method employed on an organic light emitting device comprising a plurality of pixels (65A-65R) arranged in a matrix array comprises current driven light emitting diodes (see page 2, paragraph 25), wherein it is necessary due to imperfections a calibration for the gamma correction to match the image with the characteristics of the plurality of pixels (see page 2, paragraph 26).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for calibration for the gamma correction, as taught by Ikeda, in a device similar to that which is taught by Stam et al. and Mueller et al. in order to thereby provide an OLED display device wherein the resultant display intensity is more desirable to the user.

7. ***Claims*** **37-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stam et al. and Mueller et al as applied to **claim 28** above, and further in view of Ogawa (U.S. Patent No. 5,572,251).

With reference to **claims 37-39** Stam et al. and Mueller et at teach all that is required as explained above however fails to teach a position circuit coupled to the sensing circuit structured to determine a position on the display panel at which an external light source is pointing.

Ogawa teaches an input system for a computer including an optical position detecting unit (12) and a laser pointer (15) for generating a light point (14) on the screen (11). A light take-in portion (12a) of the optical position detecting unit (12) receives light from the light point (14) on the screen (11) and the optical position detecting unit (12) detects the position of the light point (14) (see column 3, lines 9-26). With further reference to claim 38, it is taught that it is possible for the device to detect two or more light points (see column 9, lines 9-13). Further with reference to claim 39, there is taught an image input section (29) receives signals from CCD image sensor (27) regarding positional information, which is then processed and passed to the computer unit (17) (see column 4, lines 20-35), which performs necessary data processing by using the position data that has been supplied (see column 3, lines 32-34)

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the positional detection of an external light source being pointed at the display, as taught by Ogawa, in a device similar to that which is taught by Stam et al. and Mueller et al., in order to thereby provide a system in which position detecting resolution with respect to the number of pixels in the image pickup device can be heightened so that an economical and high accurate optical position detecting unit can be provided.

Allowable Subject Matter

Claims 7, 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to **claims 1-22, 28-34, 36-57** have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues the combination of the references of Stam, Cok and Dunne do not teach the claimed inventions. Examiner, respectfully disagrees. Applicant argues where the prior art of Dunne does not cure the deficiencies of Stam and Cok. The prior art of Dunne is cited as evidentiary support for the Official Notice in the claims. Applicant had requested to provide teachings for the official notice in the previous response to the office actions. Dunne as a whole is not combined with Stam and Cok. Dunne merely provides support that the pre-biasing circuit provides a reverse bias signal to the LED for switching between sense and emit modes. Therefore, the evidentiary support of Dunne is proper and maintained.

With respect to applicant's arguments in regards to where the prior art does not teach or suggest to switch LEDs from a sense mode to an emit mode, examiner, respectfully, disagrees. In paragraph 0034-0035, Stam et al teaches where some of the LEDs are in a sense mode and some are in an emit mode.

With respect to applicant's arguments in regards to where the prior art does not teach a feedback controller for adjusting the brightness of an LED, Examiner, respectfully, disagrees.

The prior art of Cok teaches a feedback controller (22) coupled with the sensing (21) and driving circuits (12), the feedback controller adjust the brightness of an LED in response to the amount of light sensed by that LED (see column 2, line 61-column 3, lines 10).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of a feedback circuit similar to that which is taught by Cok et al. in a device similar to that which is taught by Stam et. in order to provide a device allowing light detection capabilities together with feedback logic to control the operational characteristics of the display device, improved lifetime, better brightness, uniformity, and power consumption can be achieved (see Cok et al, column 2, lines 28-39).

With respect to applicant's arguments in regards to where the prior art does not teach a sensing circuit that is configurable to sense an amount of light energy received by each of the plurality of LEDs, examiner, respectfully, disagrees. Stam et al. teaches that the sensing circuit is structured to sense an amount of light energy received by the one of the plurality of LEDS operable in sense mode and to sense an amount of light energy generated from outside the display panel (see page 3, paragraph 31).

With respect to applicant's arguments in regards to where the prior art does not teach or suggest a sensing circuit to determine a position on the display panel at which an external light source is pointing or a position locator, examiner, respectfully, disagrees. Ogawa teaches the optical position detecting unit (12) detecting the position of the light point (14) (see column 3, lines 9-26) and to detect two or more light points (see column 9, lines 9-13). The pointer of Ogawa points at a position on the display panel and is read by the detecting unit as is shown.

Thus, teaching the a position circuit coupled to the sensing circuit and structured to determine a position on the display panel at which an external light source is pointing.

With respect to applicant's arguments in regards to the prior art of Gu et al, examiner would like to point out to the applicant that Gu et al is not used as prior art.

As disclosed above the claimed limitations are taught by the combination of the prior art, thus the rejection is maintained and made FINAL.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sumati Lefkowitz
SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER

Srilakshmi K Kumar
Examiner, AU 2629
August 26, 2007